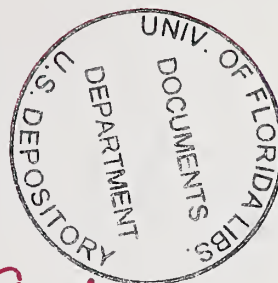


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ARROWHEAD

COMBAT DEVELOPMENTS COMMAND

April 1972



*Ask yourself -
What have you
done for this
man today ...*





Commander's Call

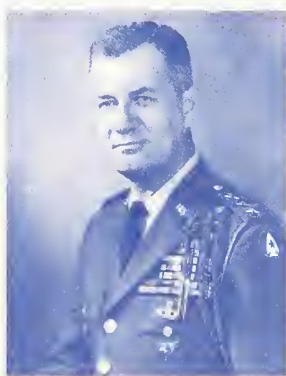
The Soldier and Tomorrow's Army

Last month I discussed the Soldier of the future — what he would be like. This month I want to consider one way the Army of tomorrow will be changed by this Soldier.

The American Soldier of the future will bring to us new technological capabilities and a greater understanding of their use. Our Army technology will thus be able to make large strides forward in mobility, automation of the battlefield and selective use of firepower.

Here is one example: we are going to have to find a more efficient, combat-effective unit that's smaller. We're looking at 100-man rifle companies. This is a logical well-thought-out approach to what we can do with a smaller force. It's a solid concept—it goes with the Modern Volunteer Army and with a very high caliber man. We look forward to these smaller, sharper units in which every man is a truly professional Soldier. We want this Soldier to spend all his time on training and on improving his skills and leadership, leaving the household chores for others to perform.

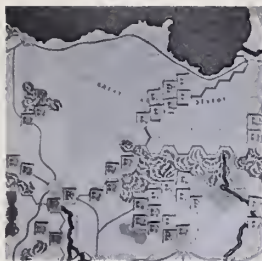
There are many other ways in which we will be adapting ourselves to the Soldier in order to become more efficient and more combat-ready. Combat Developments Command must lead the way in this endeavor. By providing a professional environment that will motivate the young Soldier of tomorrow, we are in effect creating the future American Army. That Army will be as good as our professional skills—and our dedication. Here's our challenge! Here's our opportunity to prove that CDC really means "CAN DO COMMAND"—and can set the professional structures for the Army in the field.



A handwritten signature in dark ink, appearing to read "John Norton". The signature is fluid and cursive, with a long horizontal stroke at the end.

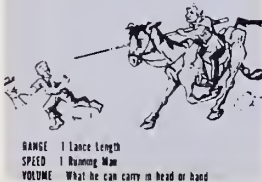
JOHN NORTON
Lieutenant General,
U.S. Army
Commanding

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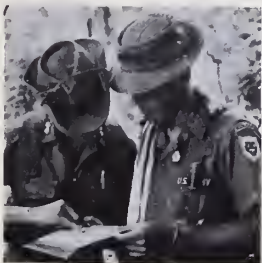
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ABOUT THE COVER

FRONT: Designed by Major Wesley W. Ford. We should all try to give a positive answer to this thought provoking question posed by LTG Norton at a recent Commanders Conference.

BACK: At CDC each day's work ultimately will benefit our men in uniform. Pictured is the distinctive insignia for the non color bearing units of the United States Army Combat Developments Command.

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EVERYTHING YOU'VE WANTED TO KNOW ABOUT THE VALUE OF INTELLIGENCE BUT WERE TOO ORSA TO ASK

by *L.T. Alan P. Hald*

Strange title? Possibly, but having project officers spending duty time playing a tabletop wargame may seem even more unusual. The game was *Blitzkrieg*, a commercial combat simulation by Avalon Hill, Inc., and the players were from the USACDC Intelligence Agency. The purpose was to develop a methodology that would put a dollar figure on the value of combat intelligence and help answer the question, "How much should the Army pay to improve its combat intelligence capabilities?"

The need to develop a methodology to quantify the value of intelligence becomes very apparent when reviewing the current and proposed resource allocation for development systems designed to improve the Army's combat intelligence collection and processing capability. During June 1971, the Combat Developments Command Experimentation Command working with Dr. Weiss of Litton Scientific Support Laboratory, proposed a simple experiment to determine the value of a perfect sensor system. Essentially, one of two combat equivalent forces, i.e., forces that would fight to a draw, would be given the simulated output of a sensor system. The number of combat units of this modified force would then be reduced until the two forces were again combat equivalent. The magnitude and direction of this fire power adjustment would measure the value of the sensor system. A combat simulation would be used to wargame both forces and determine when they were combat equivalent.

The Intelligence Agency became interested in the potential of modifying this experiment to evaluate other types of intelligence collection and

processing capabilities; and initiated research to achieve a thorough understanding of the methodology of the experiment. The selection of a combat simulation to be used in this research was guided by cost and time restrictions. Fortunately, any free play game could be modified and used to conduct the experiment.

The tabletop wargame, *Blitzkrieg*, was selected as the best readily available conventional warfare simulation. Although the accuracy of the game may be challenged, it provides sufficient realism to achieve the objective of this research. It is interesting to note that the use of tabletop wargaming to conduct research is not a new concept. Currently, USACDC Combat Systems Group is using an expanded tabletop wargame called JIFFY to gain insight into proposed force configurations, e.g., TRICAP.

Briefly, *Blitzkrieg* is a two player game played on a European type terrain board with RED and BLUE counters representing divisions of each force. The players are able to see the entire board and are aware of the location, size, type, and strength of the opponent's forces. Either player can win by destroying his opponent or by capturing his cities within a prescribed number of turns. To apply the proposed experiment's methodology, the game was modified to simulate a large differential in intelligence capability between the forces.

This was easily achieved by denying RED information about the location, size, type, and strength of all BLUE units that were not decisively engaged. Since the elements of chance precluded the likelihood that both forces would suffer identical rates of attrition, the definition of forces fighting to a draw was also modified to mean a state of equilibrium, where either

Lt. Hald is currently assigned to the CDC Intelligence Agency, Ft. Huachuca, Ariz.



Shown above is a portion of the Blitzkrieg gameboard which the CDC Intelligence Agency used to develop a methodology that would put a dollar figure on the value of combat intelligence.

side would have a 50-50 chance of winning any one of a series of games.

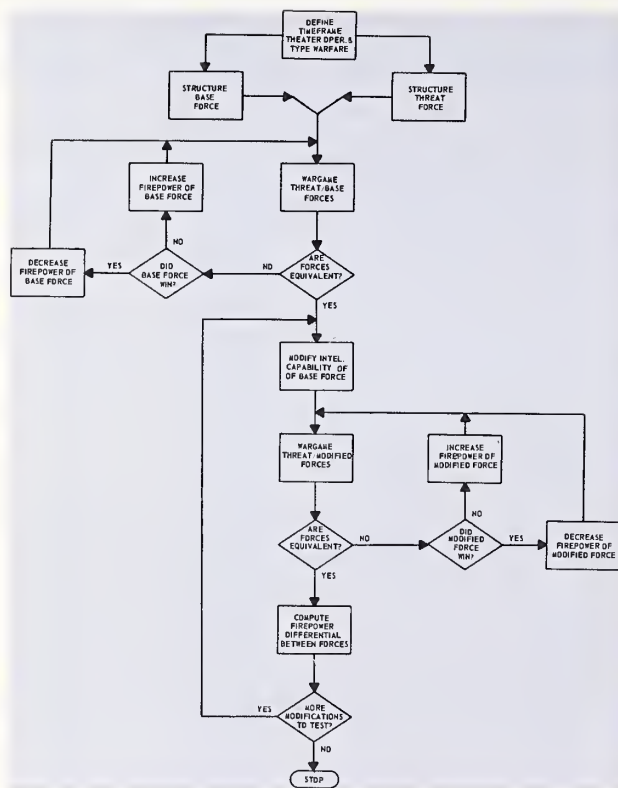
Several games were played with the firepower resources of BLUE, the force with intelligence, being adjusted after each successive game until RED and BLUE returned to a state of equilibrium. For each game, the players applied conventional tactics, attempting to anchor defenses on key terrain, massing fire power and enveloping the enemy where possible. However, RED's lack of intelligence caused several interesting variations in tactics.

To locate and make contact with BLUE, RED had to extensively use reconnaissance in force which tended to increase his combat losses. BLUE usually avoided this type of unfavorable contact by effectively utilizing his intelligence. BLUE also capitalized on RED's lack of intelligence by continually employing a tactic equivalent to a large scale ambush along RED's likely avenues of approach. RED relied heavily on terrain analysis to avoid this type of unfavorable engagement.

As the game progressed, RED realized that BLUE's primary advantage was the ability to

apply his intelligence superiority to effectively mass forces and limit the risk of a RED spoiling attack. To counter this advantage, RED was very willing to sacrifice forces to find, engage, and destroy BLUE early in the game. However, the lack of intelligence also affected RED's leadership ability, which hindered the implementation of this strategy. Its impact was readily observable when RED became completely uncertain of the relative size and disposition of BLUE's forces—he lost his confidence, became indecisive, and assumed a more defensive posture. RED had lost the will to fight and the game turned decisively in favor of BLUE.

The combat advantage BLUE gained by having superior intelligence was neutralized by a 25% reduction in the number of BLUE combat units starting the game. At this level of reduced BLUE firepower, both forces were combat equivalent even though the RED forces were one-third larger. The difference in force size indicates that BLUE's improved intelligence capability permitted a more effective application of firepower resources. However, the BLUE force could trade off this intelligence advantage for a one-third



increase in firepower and remain the combat equivalent of the RED force. Therefore, with respect to both forces, the value of the improved intelligence capability is equivalent to the values of the firepower differential between the forces. This can be expressed in dollars as the procurement cost of the firepower differential.

If the RED player desired to acquire the same capability, he should be willing to spend up to the value of that capability—the procurement cost of the firepower differential. If he had to choose between several different capabilities he might look at the ratio of the expected value of each capability to estimated cost of its procurement. This would numerically express a cost-effectiveness measure for each intelligence capability. By definition, an investment in a balanced increase of firepower resources has a cost-effectiveness measure of one. If a capability yielded a cost-effectiveness measure of two, then an investment in that capability would increase the force's combat power of the force twice as much as the same investment in additional firepower resources.

Analysis of the *Blitzkrieg* experiment has assisted in the development of the Value of Intelligence Methodology (VIM). The methodology discussed initially in this article has been

modified to reflect reconsideration of the effect of the threat, type of warfare, and theater of operation on the value of intelligence and is presented in the VIM flow chart (figure 1). By applying VIM it may be possible to determine the value of modifying the capabilities of an intelligence subsystem directly in terms of its impact on the combat effectiveness of firepower resources. This information could be used to evaluate, with respect to current intelligence capabilities, the value of making a significant modification in the intelligence subsystem. Such an experiment could be run concurrently with testing designed to gain operational data (e.g., MASSTER evaluations such as IBCS Phase IIA tests) or could be conducted separately with the operational data becoming the basis for simulation of the proposed subsystem. By applying cost-effectiveness measures discussed earlier, alternative modifications could be screened to determine which deserved further development.

Since the application of VIM provides one composite measure of effectiveness—combat power—it would be feasible to directly compare and trade off unlike systems on the basis of the costs necessary to attain a desired level of combat power. The use of techniques similar to the cost-effectiveness measure could help determine how to effectively allocate resources between diverse options such as costly major improvements in the operations subsystem, intelligence subsystem, support subsystems, or additions to firepower resources of a force.

Although VIM is promising, it should be remembered that the results of VIM are not fine measurements. Successive approximations and subjective evaluations are required to determine when both forces are combat equivalent; therefore, VIM is best suited for measuring large changes in the intelligence that may have a significant impact on the effectiveness of a force's firepower resources. Also, the ability to apply VIM to the development of force structure is dependent upon the simulation's ability to effectively represent the systems being studied. To date, insufficient validated data has been compiled on the performance of collection subsystems and the processing of data into intelligence. The nature of current and proposed intelligence subsystems must be better understood by collecting and analyzing data on their performance. Testing done at MASSTER, combined with performance studies of the intelligence subsystem and developmental computer simulations, can become a source of this data.



A LOOK AT THE INTEGRATED BATTLEFIELD CONTROL SYSTEM

by BG Edward F. Gudgel, Jr.

INTEGRATED BATTLEFIELD CONTROL SYSTEM



RANGE = 1 Lance Length
SPEED = 1 Running Man
VOLUME = What he can carry in head or hand

Elements of Command and Control Lacking

Almost two years prior to the 14 April 1865 surrender at Appomatox, General Lee's Confederate forces, outnumbered two to one, held an untenable position at Chancellorsville. If General "Fighting Joe" Hooker of the Union Army had exploited the situation, he might well have ended the war then and there.

Why did he let this opportunity slip away?

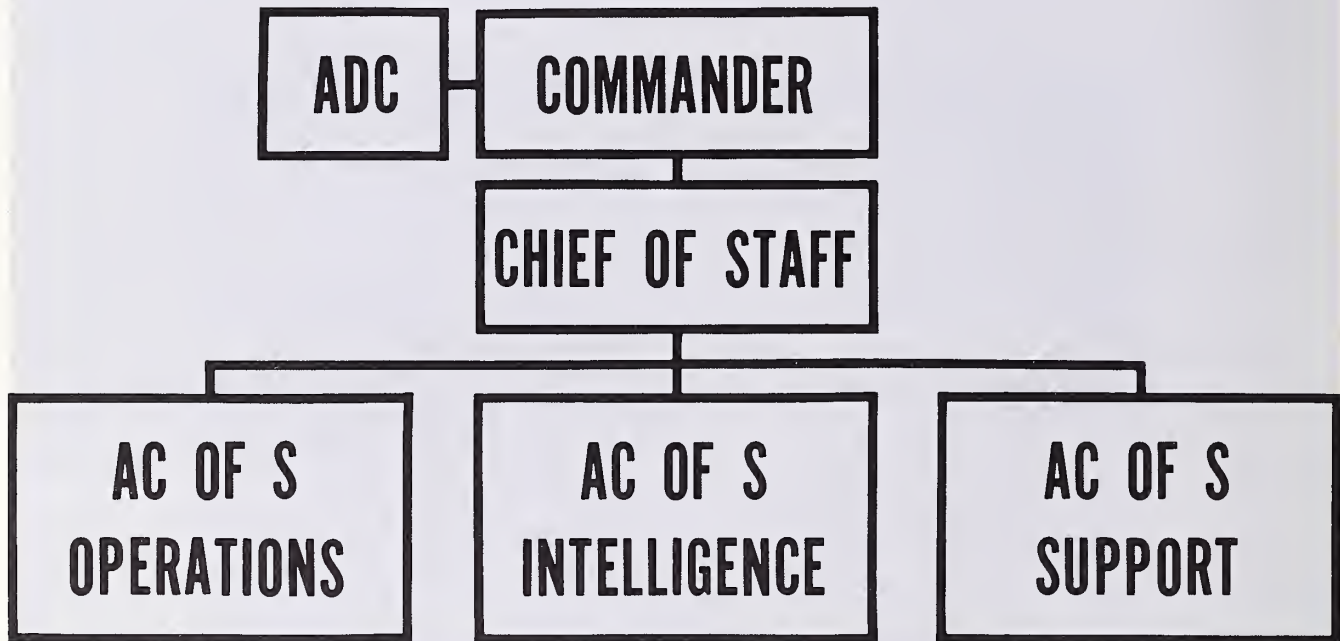
BG Gudgel is the Commanding General of the CDC Intelligence and Control Systems Group, Ft. Belvoir, Va.

Speculation has it that he simply could not conceive of an operation requiring his direct control with two of his seven corps headquarters located a considerable distance from his command post. Lack of timely communications hindered his awareness of the situation, and the effectiveness of his command was severely hampered.

It is not necessary to go back over 100 years into military history to observe generally the same kinds of decisions being lost—and for the same reasons. Deficiencies in command and control have adversely affected the outcome of many important battles throughout history.

The United States Army Combat Development Command (USACDC) is actively engaged in

IBCS PHASE I CONCEPT ORGANIZATION



the evolutionary development of an improved command and control system concept known as the "Integrated Battlefield Control System" (IBCS). Within CDC, the Intelligence and Control Systems Group is tasked with the responsibility for developing the concept and providing within it the framework for accommodating the introduction of tactical automatic data processing systems as they become available.

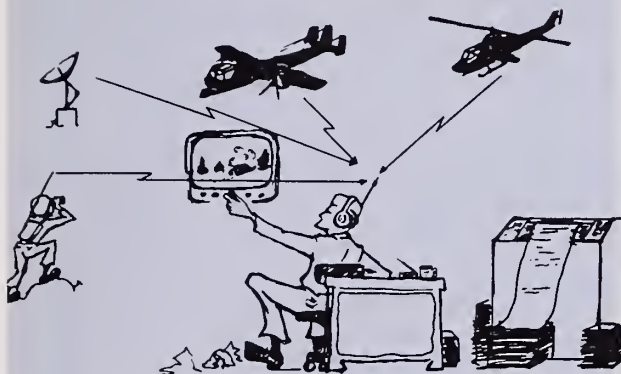
BATTLEFIELD CONTROL SYSTEMS NOT NEW

Armies have had battlefield control systems throughout history. Alexander the Great commanded and controlled his forces based on what he saw from a hilltop using the simplest systems—direct observation, experience, and direct contact. The relay of information has steadily improved through the years, progressing from the observation balloon, the telegraph, the wireless, and the radio to today's modern communi-

cations media utilizing visual display screens and satellite relay stations.

Today, the nerve center of a typical division Command Post is the tactical operations center (TOC). The TOC is manned by Intelligence (G2), Operations (G3), Fire Support and Administration personnel. Information provided by improved intelligence gathering capabilities such as surveillance, target acquisition and night observation (STANO) activities, has caused the TOC to expand in physical size and number of people. The increase in available information which requires processing and analysis, has confronted the commander and staff with the problem of insuring that only information which is essential to the decision making process is considered. To do so, all information must be processed and analyzed to identify what is pertinent and must be readily available to the commander. This is a time consuming process, and one which has nearly inundated the current staff.

INTEGRATED BATTLEFIELD CONTROL SYSTEM



RANGE = 1 ICBM
SPEED = About the speed of light
VOLUME = Appalling

WHY IBCS NOW?

Since the quality of a commander's decision is based on the timeliness and accuracy of information available, it is essential to gather information more quickly and accurately. Technologies for obtaining, disseminating and storing data are readily available in various forms. Careful selection and integration of automated systems can solve the problem of gathering and storing information more quickly and completely than the current manual method. The Army's problem now is to select and integrate the tools which can assist most in speeding up this process.

The basic G-staff configurations, coupled with standard manual operations, have offered only limited innovations since the WW II period. It is the improvement in Command and Control (Concepts, Doctrine, Materiel and Organization) that will strongly impact on the total force designs for the Army in the Field. Supported by automated data systems, the end result could be more effective Command and Control based on modernization, simplification, and more timely utilization of current command and control techniques.

In 1962 a program entitled "Command and Control Information Systems—1970" (CCIS-70) was created to provide some degree of central management for Army ADP systems. The program was highly ambitious and was never fully implemented primarily due to its orientation toward hardware development initiated in isolation by diverse agencies.

The next step in the progression of the Army's recognition of the use of automated systems was a redefinition of responsibilities with respect to tactical data systems resulting in a new program termed "Army Tactical Data Systems", or ARTADS. This program directs development responsibilities for five systems: Tactical Operations Systems (TOS), Tactical Fire Direction Systems (TACFIRE), Air Defense Control and Coordination System (AN/TSQ-73), Air Traffic Management Systems (ATMS), Tactical Army Security Combat Support Intelligence and Countermeasures Systems (TAGASA), and during CY 1972 will assume direction of the Combat Service Support System (CS₃).

While each of the above programs is adding much to the Army's knowledge of how ADP can be adopted for use in individual functional areas, the programs must be oriented toward being collectively responsible to the total needs of the commander in his command and control efforts. To avoid the development and fielding of ADP systems which funnel data without regard to different ADP systems requires a different approach. The introduction of the IBCS concept could be a solution.

THE IBCS CONFLICT

At the present time, the IBCS is envisioned as the structural framework of personnel, organizations, concepts, doctrine, and equipment for integrating the functions of combat into a coherent system workable in a battlefield environment.

Basically, Army combat developers conceive of the IBCS as consisting of four functional subsystems, designed to integrate the five functions of land combat—mobility, firepower, intelligence, support, and command and control. When the system is fully developed, essential information will be automatically processed in real-time so that decisions can be made and orders issued to employ combat power at the time and place needed. Each of the automated systems supporting the organization will feed and support each of the others as necessary to meet the needs of the commander.

The four subsystems of IBCS are the Commander's Integrating Subsystem (CIS), the Intelligence Subsystem, the Operations Subsystem and the Support Subsystem. They are all inter-related, but, basically, the Intelligence, Operations and Support Subsystems support the CIS. The CIS, then, is the heart of the IBCS. It integrates the inputs provided by the three support-

ing subsystems in a manner that will best support the commander.

The Commander's Integrating Subsystem includes the commander, his command group, the Chief of Staff Section and other staff members when appropriate, and a Display Section. The basic purpose of the CIS is to maintain the commander's minimum essential information for presentation to the commander for his use in making decisions and commanding and controlling the unit. Eventually we expect to have visual displays connecting the supporting subsystems and controlled by automated processing systems. At the higher echelons the CIS will be primarily automated, while at the lower echelons it may continue to be essentially manual with limited ADP support.

The Intelligence Subsystem controls and integrates the collection of enemy information and the continuous production of intelligence for the use of the commander and the other subsystems. It also produces and processes terrain and weather information and directs counter-intelligence and intelligence collection management. Information collected from all intelligence sources is processed by the Battlefield Information Control Center (BICC), which is part of the Intelligence Subsystem. Manual BICCs are currently undergoing field evaluation. Future BICCs will be supported by automated information handling to expedite the processing of information and to provide data links to higher, lower, and adjacent echelons so that intelligence can be available on a real-time basis to meet the needs of the commander.

The Operations Subsystem assists the Commander in planning and controlling the combat and combat support functions of the command. Together with the other subsystems, it assists the commander in estimating the situation, analyzing alternative courses of action, and making decisions. It also prepares tactical plans and orders based on the commander's decision, assists the commander in identifying opportunities and vulnerabilities that develop during combat operations, and provides a continuous assessment of the results of the directed operations.

The Support Subsystem assists the commander in planning and controlling the combat service support functions of the unit. It is organized to streamline its structure, increase its responsiveness, and improve its overall effectiveness. Certain support functions are already automated. The Combat Service Support System (CS₃) is now being used by III Corps at Ft. Hood, Tex.

Connected by automated tactical digital communications systems, the supporting subsystems, in effect, work for the CIS in their specialized areas and will permit the proper interface with command and control systems of other services.

EVALUATION AND REFINEMENT

Concept evaluation and refinement efforts have been initiated in the form of experimentation and further study of related elements.

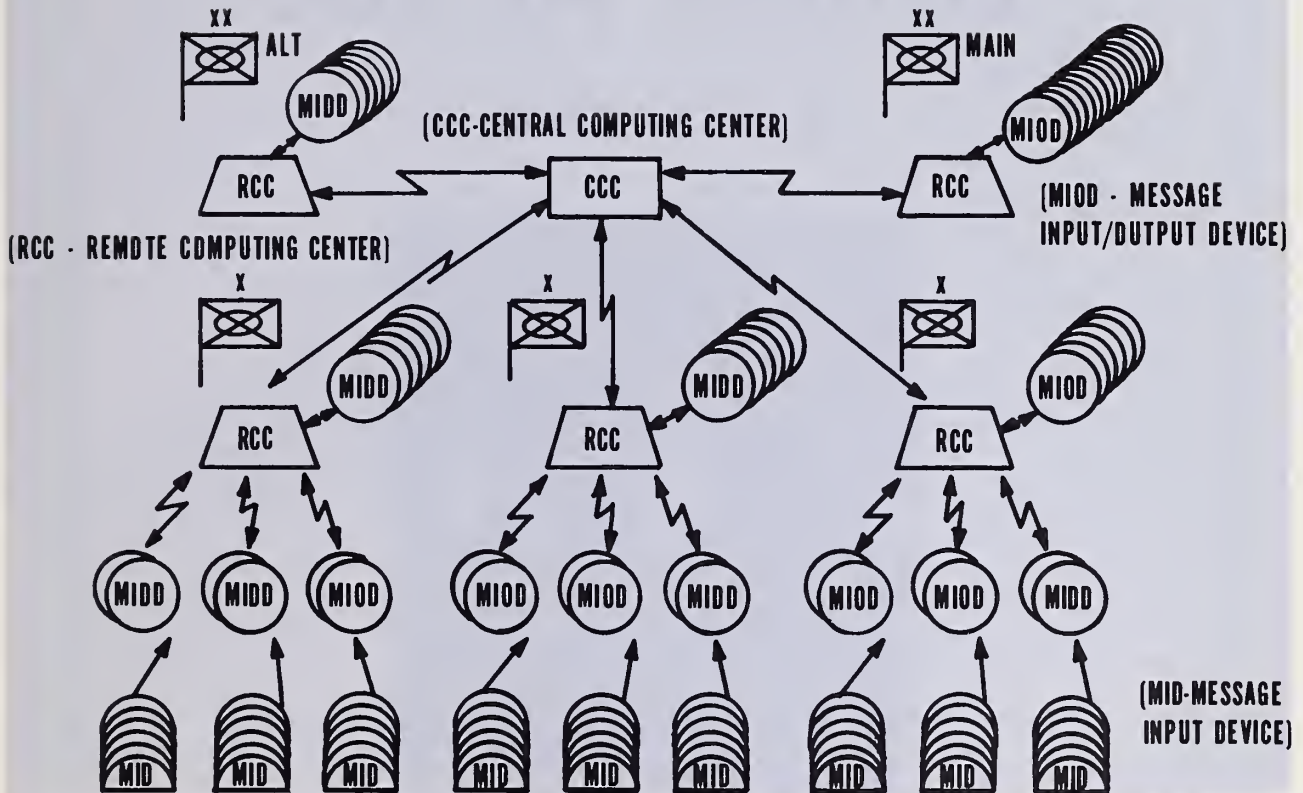
One such effort, currently underway, is a series of experiments being conducted by the Modern Army Selected Systems Test, Evaluation, and Review (MASSTER) Command at Ft. Hood, Tex. These experiments utilize the Development Tactical Operations System (DEV-TOS), an automated data processing system designed to provide data storage and retrieval capability to the commander and his staff elements. It consists of a Central Computing Center (CCC) which contains a Control Data Corporation 3300 computer augmented by an auxiliary core memory. The five-van CCC is located at the TOS Development Group Headquarters at Ft. Hood. Initial experiments are designed to provide data which will assist in acquisition of the next generation of TOS equipment, data which will contribute to a cost effectiveness analysis and support the development of the IBCS Systems Definition. Using the DEV-TOS, MASSTER will evaluate the organization, operational concepts, and command and control doctrine for battalion, brigade, and division headquarters as described in the Refinement of the IBCS Concept.

A second series of experiments will utilize a Tactical Operations Systems TOS Operable Segment (TOS²) used in support of the IBCS concept. TOS² will use improved militarized ADP equipment and will be programmed to meet the commander's minimum essential information needs. It is anticipated that the test bed configuration will be delivered to MASSTER in early 1974 for testing in a field environment.

Major objectives of this second series of experiments are: to refine initial user requirements; evaluate the systems performance; contribute input to the design specifications for future development of the Division-Level Prototype TOS system; and insure that the Prototype TOS will satisfy the tactical commander's minimum essential information needs.

Upon successful completion of testing, a Division level TOS system will be integrated into IBCS and will become the primary automated

DIVISION LEVEL TOS



support for IBCS. The other automated systems (TACFIRE, CS_s, etc.) will feed essential information into TOS.

Concurrent with the development of the IBCS, the Intelligence and Control Systems Group of CDC is studying and analyzing the requirements and capabilities for all Army tactical automated data systems to operate in conjunction with each other in support of the ultimate IBCS. This interoperability among data systems is initially being studied at all echelons of the field army and will eventually encompass the specification for data traffic among systems within the field army and the data systems of the Department of Defense, Department of the Army and other services. A separate study to determine future communications requirements is also being conducted with the objective of developing a balanced, responsive tactical communications capability to support all essential operations of the army in the field.

SUMMARY

Simply stated, the Army is continually striving to provide the commander with the capability to assimilate rapidly the mass of enemy and friendly information available; to have it presented in some logical format so that he may quickly analyze his possible courses of action; and having made his decision, disseminate the required orders in a timely manner. The IBCS concept is designed to harness the rapidly advancing technology of communications and automatic data processing, so that the Army's command and control systems can be aligned with and exploit the already rapid advances we have made in mobility and firepower and in information acquisition and intelligence production. The concepts and requirements developed by CDC, plus the ADP systems currently being developed by the Army Materiel Command, will ultimately fuse together to become the integrated battlefield control system of tomorrow.



THE ROLE OF THE JUNIOR OFFICER AT CDC

by LT. David V. Kernich



The United States withdrawal from the Vietnam conflict has resulted in numerous changes in personnel assignment policies throughout the Army. Most notable among these, from a CDC point of view, has been the substantial increase in the number of junior officers assigned positions throughout the CDC agencies and Headquarters structure. In most cases these young officers are relatively inexperienced and, for many, the job at CDC is their initial assignment upon completion of the branch basic courses.

The assignment of inexperienced personnel to jobs demanding research and analytical skills is a novel development since such positions have

traditionally been given to senior officers of field grade level. As might be expected, this new situation has engendered a certain amount of criticism from varied and sundry sources. The most frequently heard objection seems to be that all officers assigned to this organization should possess substantial experience at troop level. Conventional wisdom says inexperienced personnel have little if anything to contribute toward mission accomplishment at CDC. It is the purpose of this article to refute that point of view through an examination of the positive as well as negative aspects of the situation. The article concludes with some general recommen-

Lt. Kernich is a management Analyst in the Plans and Program Division at CDC Supply Agency at Ft. Lee, Va.

Editor's Note: This article represents the views of a young officer assigned to CDC. The *Arrowhead* welcomes counter-viewpoints from other officers within CDC. Comments should be directed to the Editor, *Arrowhead*, CDC Information Office, Ft. Belvoir, Va. 22060

dations for enhancing the value of the junior officer to his colleagues and superiors at CDC.

It should be noted that this cursory examination is written from the admittedly limited perspective of a single officer assigned to a CDC agency. Thus it remains the reader's responsibility to place the observations stated into the context of his own experience and situation at CDC—and then decide whether he can concur with the views expressed herein. Also, the reader should bear in mind that the type of job positions we are concerned with here are those requiring familiarity with research and analytical concepts, e.g., a study team participant. Comments are not deemed applicable to jobs of a purely administrative nature.

From the positive standpoint, there are three major advantages that the junior officer brings to his work; any or all of which are capable of greatly enhancing his productive value to the organization if they are identified and exploited. In decreasing order of importance these are: objectivity, source of new ideas, and ability to adapt to the "academic" environment at CDC.

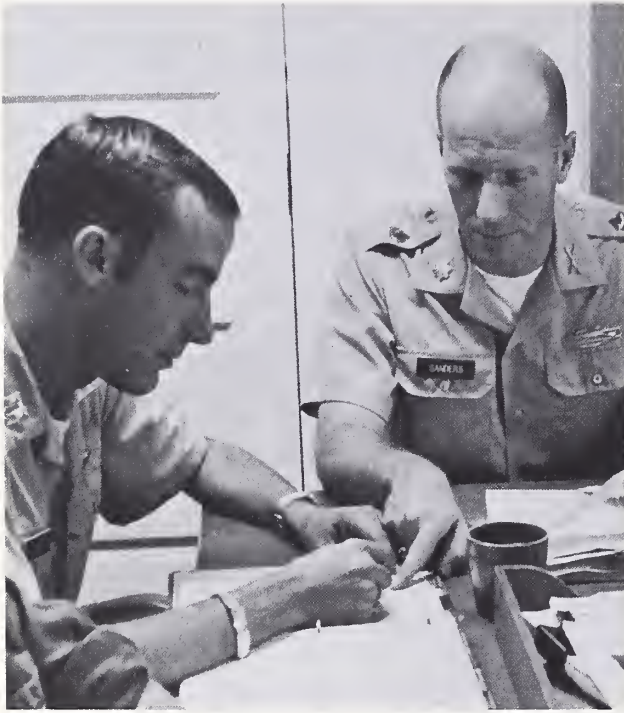
Objectivity—the capacity to formulate recommendations and render decisions based solely on the facts at hand without regard to personal prejudice, aggrandizement, or ambition—is the most important of the three. Any research that does not embody this feature is suspect and accompanying findings or recommendations should be regarded with skepticism. The inexperienced junior officer, without career aspirations, is in a decidedly better position than his senior colleagues to inject such objectivity into his work. Being inexperienced, his judgments are unlikely to be colored by the personal prejudices an older officer inevitably acquires concomitant with experience. Further, in situations where known facts lead to irrefutable conclusions but personal desires of a superior are inclined to another, the young officer, unmindful of career aspirations, can afford to ignore the latter course in favor of the former. His thinking need not be distorted by desires to further his own ends, for he has no ambitions for advancement in the military. Even the omni-present efficiency report holds no threat. For the non-career officer a good report is only an ego-satisfying mechanism unladen by promise of long-range benefit.

An oft-overlooked contribution the junior officer can make to CDC is a source of new ideas. Having recently departed the civilian sector, the young lieutenant or captain can add a new dimension to the organization through his non-

military mode of thought. Also, since most officers come directly from the academic environs of the college or university, they have had the opportunity to be exposed to the latest concepts, techniques, and accomplishments in various fields of interest to CDC, e.g., transportation, data processing, operations research, etc. This capability assumes critical import for those elements of CDC which accomplish their missions with the aid of civilian research organizations. Virtually all of these firms attract a steady stream of recent graduates into their employ. It becomes virtually impossible for CDC to effectively monitor the work of such individuals without personnel familiar with the new technology the contractor might utilize to facilitate the accomplishment of his assigned task. Furthermore, not only can the junior officer serve as a source of ideas but, not constrained by the career pressures peculiar to his senior counterparts, he has no reason to fear upsetting the status quo by fostering the implementation of new concepts. Thus, the non-career oriented lieutenant or captain is in a position to function as a catalyst for change within the organization.

A third advantage of assigning the junior officer to CDC is his ready adaptability to the prevailing "academic" environment. This is a relatively simple transition for the man just out of college, whereas the senior officer, accustomed to the atmosphere of a troop unit, may find the change exceedingly difficult and well nigh impossible to make. Readers can probably readily cite examples of senior men who could never quite make the adjustment from life to the troop unit to life at CDC—a failure that resulted in a job poorly done, if done at all. In contrast, the prospect of a junior officer unlikely to be burdened with transitional problems looms appealing indeed.

Most of the disadvantages of junior officers at CDC are fairly obvious and thus will not be dwelt on at length. Lack of experience is the major drawback. This handicap will normally prevent the young officer from functioning effectively as a study team leader. In addition, his non-military ideas and attitudes may at times create friction between himself and his senior colleagues, both military and civilian. Also, his naivete' of the military environment and methods of operation will tend to undermine his credibility in the eyes of others and may even make him vulnerable to ridicule on occasion. Lastly, the unique atmosphere surrounding CDC really does not allow the junior officer to obtain a realistic image of the Army as it exists else-



"At all echelons of CDC, creating the proper work environment for the junior officer (as well as others) is a critical factor in assuring that maximum advantage is derived from services rendered."

where. This compounds the difficulty of reaching a decision for the young officer who might otherwise contemplate a military career.

Consideration of both the negative and positive aspects of assigning junior officers to CDC makes it apparent that, generally speaking, the weaknesses the young officer brings to the organization will usually be compensated for by the strengths of his senior counterparts. Conversely, the advantages gained by utilizing junior officers offset the disadvantages common with senior military personnel. This complementary relationship suggests the need for both types of officers at CDC. However, assuming experience is still the single most important element, the personnel makeup of the organization should probably be balanced in favor of senior members.

Once the need for junior officers is recognized and accepted, there are certain actions that can be taken throughout CDC to ensure that maximum benefit is gained from the services of younger officers. At Headquarters level, every effort should be made to ensure that highly qualified junior officers are made available for assignment to CDC by the various branch personnel offices. These should be men with strong

academic backgrounds in disciplines of interest to CDC, e.g., operations research/systems analysis. An advanced degree would be desirable though not required. Further, these men should have previously indicated a desire not to pursue a military career. Finally, men with no experience would be preferred. (This is a direct counter to those who desire the officer have a troop assignment before coming to CDC, basing their conviction on the premise that some experience, however limited, is better than none. What is overlooked, however, is the danger posed by the tendency to overgeneralize from only a year or two of experience in a troop unit. To avoid this pitfall, the officer with no experience is recommended. He can then draw on the more broad-based and reliable experience of the senior members of the organization when necessary)

At all echelons of CDC, creating the proper work environment for the junior officer (as well as others) is a critical factor in assuring that maximum advantage is derived from services rendered. To this end, two recommendations are offered especially for those commanders who number inexperienced officers among their subordinates. First, encourage a free interchange of thoughts and ideas among personnel. Such an atmosphere serves as a fertile breeding ground for the growth of original and creative thought. Outspokenness is a virtue in young officers so long as heed is paid on the need for tactfulness as well. Second, ensure that the junior officer does not become an object of ridicule for suggestions he puts forth that reflect his naivete' about the Army and its methods of operations. When rebuke or criticism of the young officer is required, be certain to explain the "why" of the situation. Never expect the junior officer to be satisfied by a trite explanation without foundation, e.g., "because the Army has always done it that way." The young officer who allows himself to be satisfied with such a "reason" is not likely to be the kind of man who will make much of a contribution to the organization for he apparently lacks the intellectual curiosity and/or moral fortitude to effectively meet the demands of his job.

In conclusion, it would seem that the observations appearing in this article are of sufficient validity to warrant serious consideration by commanders throughout CDC. Hopefully, such consideration will ultimately lead to actions consistent with the recommendations proposed above resulting in an increasingly effective and efficient military organization.



ARMY MEDICINE BEING EXAMINED



"... we have developed a medical family that, while working for and subordinate to the physician, is no less important than the physician if the patient is to receive optimum medical care."

Since World War II technology has advanced the state of the art in every scientific field. Medicine has been no exception.

The ever advancing state of the art of medicine and heavier reliance on more responsive evacuation techniques, as well as new families of weapon systems and emergence of guerrilla/counterguerrilla warfare, have contributed to the need for reevaluating our present medical planning factors and medical materiel planning. Not only is the relative size of our national reservoir of professional medical specialists decreasing; but more than ever before, the civilian population is increasing its demands for better and more extensive medical care.

To meet this challenge the USACDC Medical Service Agency has started the "Medical Planning Factors" Study to be done under the auspices of Headquarters, Combat Developments Command. The purpose of this study is to develop reliable medical planning factors for current as well as future organizational and operational planning. It also will develop a methodology for the determination of requirements and the most

efficient allocation of medical resources for the army in the field.

The purpose of Army medicine is to conserve the Army strength. For this it must bring the patient and the physician together. To do this as efficiently as possible, we have developed a medical family that, while working for and subordinate to the physician, is no less important than the physician if the patient is to receive optimum medical care. There is a mutual dependence and interaction among all medical facilities which results in a continuous system of care and evacuation.

The life saving procedures and techniques utilized on the battlefield and in the forward areas impact directly on the CONUS facilities. This most certainly influences the length of time patients will be treated in CONUS. Because of interdependence this health care must be continuous from the initial injury on the battlefield thru evacuation to the patient's final treatment and discharge from a CONUS facility. The intent is to return the patient to duty as soon as medically feasible. Consequently, when planning



"It will also develop a methodology for the determination of requirements and the most efficient allocation of medical resources for the army in the field."

future force structures, contingency mobilization, or operational requirements, because of increasingly limited resources, we must determine the most efficient allocation of resources throughout the entire medical system.

Adjustments in any portion of the medical support system will have a significant impact in other areas of the medical system. Without this study the estimate of resource requirements for the US Army medical units in the field will continue to be based on factors that may be outdated or require validation.

The trend today, and for the future, appears to be toward streamlined, compact, almost self-sufficient fighting forces. For the Army Medical Department to meet this challenge and continue to provide quality medical support, we must reevaluate our present thinking. Part of our challenge is to reduce costs, eliminate unneeded equipment, standardize equipment whenever possible, and eliminate mismanagement of our most important resource, which is an increasingly reduced professionally trained manpower pool. Without this study we will continue to receive criticism from without and within the military community by professional and para-professional personnel because of our seeming over-commitment of critical resources.

With this study the total health care system will be better managed because the impact on the CONUS base will be determined. We then will be able to accurately determine where and to what degree critically limited medical resources can be utilized for optimum efficiency.

We must be able to identify the exact requirements and capabilities of our professional and para-professional manpower resources and the cause and effect relationships when we vary the professional ability or degree of training in any segment of the medical system. Because of the constantly changing requirements placed on the military, there will continue to be a difference between resource requirements and medical assets available. Medical planners must be able to identify exactly up to date capabilities of medical units and understand, as well as plan for, any impact that results to the remainder of the medical community when a unit is deployed.

In summary, the objectives of the medical planning factors study are: to provide reliable medical planning factors applicable to the army in the field, to develop an improved methodology for the determination of medical requirements and the most efficient allocation of resources, and to assure that the planning factors are reliable and applicable.



INTELLIGENCE AND THREAT DIVISION STUDIES THE ENEMY OF THE FUTURE

by LT. George D. Penick



Colonel Jack P. Dillender

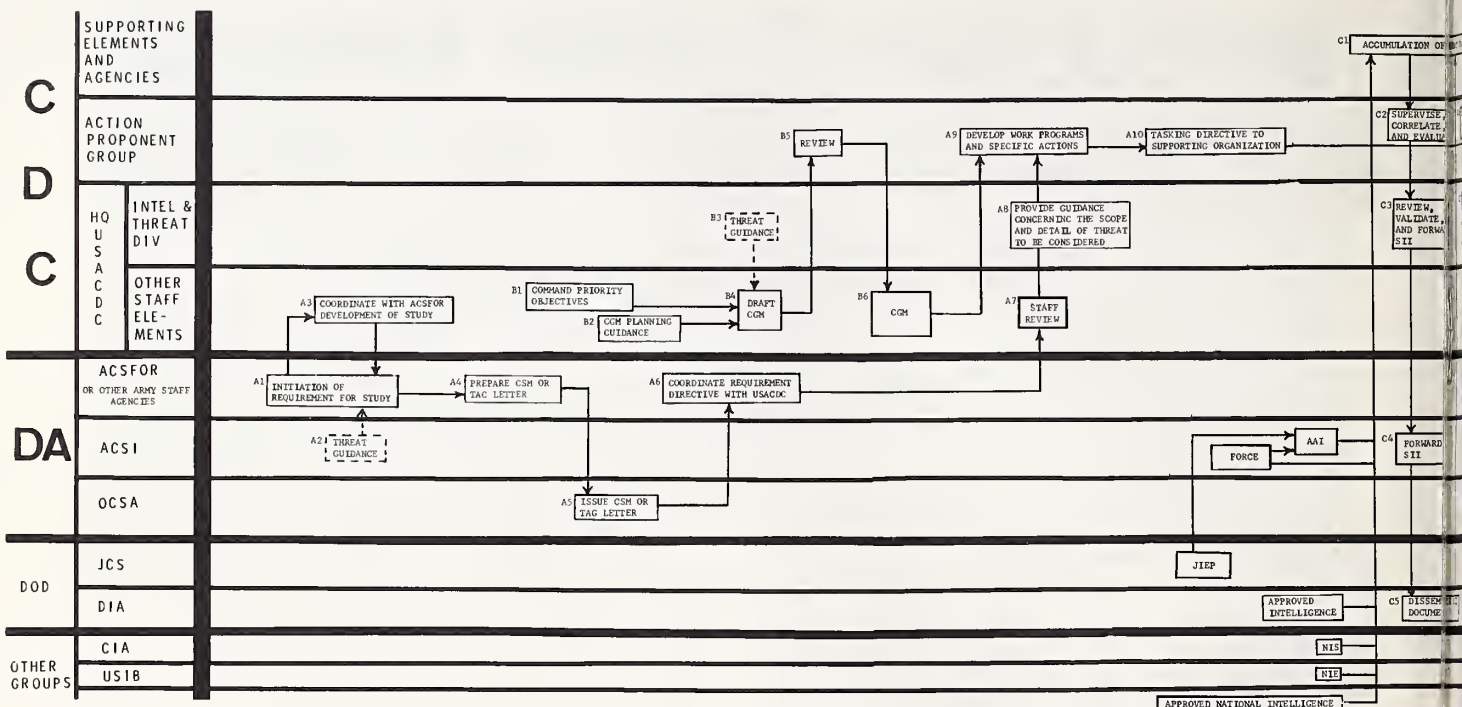
If you were asked to develop a force for the future Army, what is one of the first things you would need to know? Most of us would want to know what the enemy threat will be. For CDC to effectively determine how the United States Army is going to fight, be equipped, and be organized, it must first know how the potential enemy fights, how it is equipped, and how it is organized.

Whenever a study is undertaken by CDC the study agency is required to develop a threat annex upon which the study is oriented. The threat annex establishes what the most likely enemy threat will be for the given situation. Anticipation must be made, based on the best available current intelligence, as to *who* the army will be fighting, *what* weapons and forces it will be fighting, and *where* and *when* it will be fighting. It is the job of the supporting group or agency which prepares the study to draw up the threat annex.

The Intelligence and Threat Division at Headquarters, USACDC, under the leadership of COL Jack P. Dillender, monitors the use of intelligence within CDC. It insures that the group or agency receives proper threat guidance from the tasking directive at the beginning of a study and that the threat which is produced is accurate and pertinent to the proposed study. It coordinates the needs of the subordinate elements with higher intelligence organizations—the Assistant Chief of Staff for Intelligence (ACSI), or the Defense Intelligence Agency (DIA) through ACSI—if the ability to fulfill the intelligence requirement is not directly available within CDC.

The Division's Technology and Trends Branch monitors technical developments and forecasts of trends in hardware development of potential enemies. The Threats and Analysis Branch determines how the potential enemy is most likely to use its equipment and what its organization and tactics are most likely to be in a given situation.

An accurate study is dependent on an accurate threat. If the development of the threat is not given proper guidance it is possible that the study conclusions may be invalid. The unfortunate result is that the validity of the study itself could be questioned. An inaccurate threat inevitably leads to delays due to changes necessary to correct the mistakes, and it results in time lost in placing the developed material in the hands of the troops. If the threat for a study is properly developed—as diagrammed in the accompanying chart—then the Intelligence and Threat Division will be better prepared to insure the use of accurate threats in all CDC studies.



DEVELOPMENT OF THREAT

Threat goes through many stages of development before it is finally introduced into a study. This chart shows the actions that current regulations require in the development of a threat. The annotated references identify which regulations apply to a particular box.

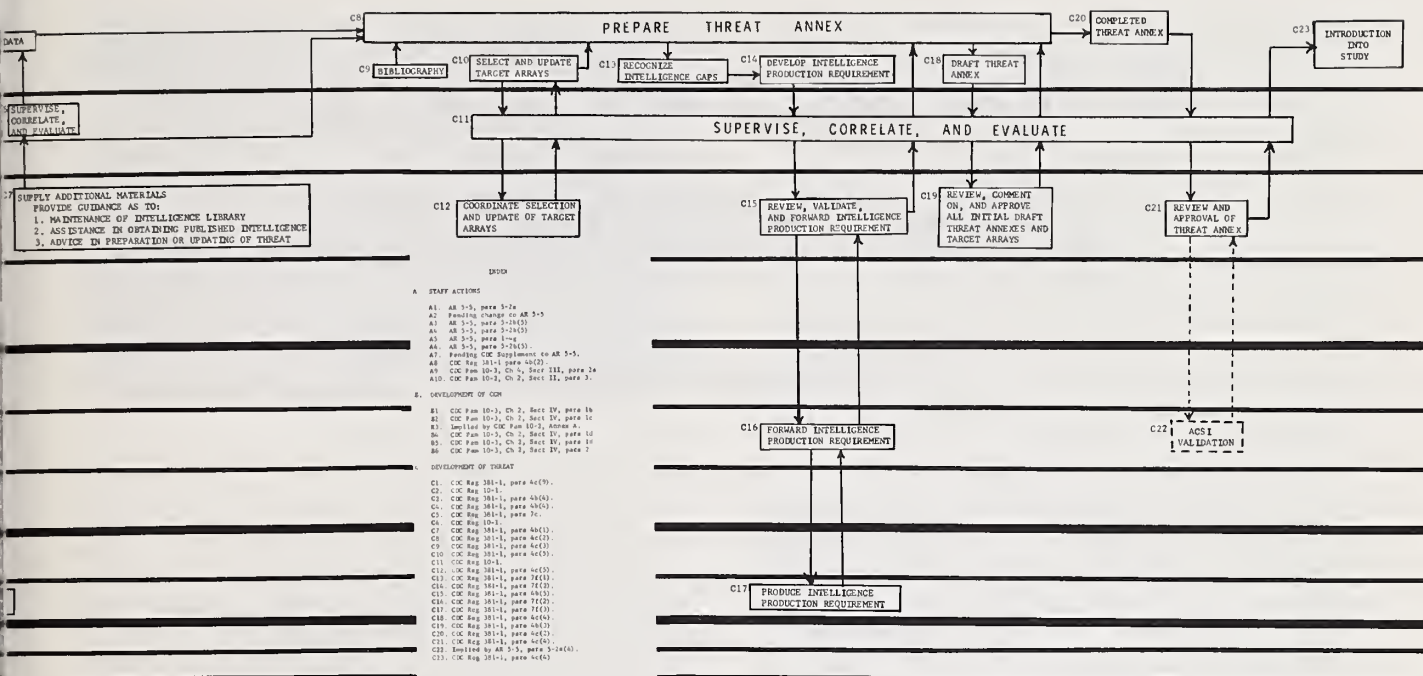
A study is initiated by a Department of the Army Staff Agency (A1), usually the Assistant Chief of Staff for Force Development (ACSFOR), and is coordinated with Headquarters, United States Army Combat Development Command (A3). A recent change to Army Regulation 5-5 will have the Assistant Chief of Staff for Intelligence (ACSI) give threat guidance to the study at this point (A2). Either a Chief of Staff Memorandum or The Adjutant General (TAG) letter is then prepared (A4) which is issued by the Department of the Army (A5) and returned to the Army Staff Agency to be coordinated with HQ USACDC before it is sent to the Command (6).

CDC uses Command Guidance Memorandums (CGMs) to give broad guidance to the development of both DA and CDC directed studies. The CGMs are prepared by HQ USACDC and are based on the Command Priority Objectives (B1)

and the CGM Planning Guidance (B2). The CGMs contain a threat paragraph which is prepared with guidance from the Intelligence and Threat Division (B3); although this is not spelled out in regulations, it is implied by normal staff functions. The CGMs, after review by the groups (B5), are intended to guide the group in its development and execution of studies (B6).

The DA directive is sent to HQ USACDC where it is reviewed (A7). The new CDC Supplement to AR 5-5 provides for the directive to be coordinated with HQ USACDC for threat guidance (A8). The Action Proponent Group has the responsibility for developing a work program for the study (A9) and then issuing the tasking directive to the supporting organization (A10).

Each CDC element is responsible for the accumulation of a threat data base (C1) to support any study with which it might be tasked. This threat data base is independent of any study directive or CGM. The data base will consist of the basic intelligence documents which the agency would be authorized to use as the Army Analysis of Intelligence (AAI), Forecast of Conflict Environment (FORCE) documents, and other approved intelligence. The Statement of Intelligence Interest (SII) tells DIA the areas of intelligence interest of the elements of the Command. This list is forwarded through the group (C2), through the Intelligence & Threat



Division (C3) to ACSI (C4), and then to DIA (C5). Intelligence information within the element's area of interest is sent directly to the agency by DIA without going back through channels. The Intelligence and Threat Division is charged to assist the agency in its development of the threat by providing guidance as to the maintenance of an intelligence library, assistance in obtaining published intelligence, and advice in the preparation and updating of the threat (C7) (CDC Pamphlet 381-1).

The supporting element receives a tasking directive from the Action Proponent Group and uses its existing threat data base to begin work on the preparation of the threat annex (C8). The first step is the development of a thorough bibliography (C9) for the study. Target arrays, if required, are selected and updated by the agency (C10) with coordination and assistance from the Intelligence & Threat Division (12).

In the development of a threat annex or during the accumulation of the threat data base (the chart shows this happening in the development of the annex) an agency will sometimes recognize that there is a gap in the intelligence to which it has access (C13). The agency then develops an Intelligence Production Requirement (IPR)(C14) which is sent through the Group (C11) to the Intelligence and Threat Division (C15) where it is reviewed and vali-

dated at both levels and—if it cannot be fulfilled—forwarded to ACSI (C16) where—again, if it cannot be fulfilled—it is forwarded to DIA (C17). DIA produces the intelligence and sends it back through channels for use by the requesting agency.

The role of the Action Proponent Group during this time is to supervise, correlate, and evaluate the work of the supporting element to fulfill its mission in the lead-horse concept (C2, C6, C11).

The agency develops a draft threat annex (C18) which is reviewed and commented on by the Intelligence & Threat Division (C19). The agency then issues its completed threat annex (C20). The annex is reviewed and validated by the Intelligence and Threat Division (C21). If required, Intelligence and Threat Division sends the threat to ACSI for validation (C22). ACSI is charged by regulation with responsibility for all threat assessment. Although validation by ACSI is not spelled out specifically in regulation, a judgment is made during staff review by the Intelligence and Threat Division if such validation is essential for the particular study.

After ACSI validation the threat is returned to the Intelligence and Threat Division which forwards it back through the group to the preparing agency. The threat is incorporated into the study at this point (C23), and the agency may proceed with an accurate and valid threat on which to base the study.

Lt. Penick is currently assigned to the Intelligence and Threat Division, of the Concepts and Doctrine Division, Ft. Belvoir, Va.

IS OUR MILITARY ADVISORY EFFORT MISORIENTED?

by William M. Hartness

A US Army advisor in a Latin American country recently made the comment, "The best thing that could happen to this country is for me to leave. This would force them (the host country (HC) Army) to rely on themselves."

While acknowledging the necessity of US military advice and assistance to foreign countries, many advisors present arguments which tend to indicate that our Military Assistance Program (MAP) may, in some areas, be misoriented.

Prior to Congressional action in October 1971 to abolish the US Foreign Assistance Program (of which military assistance is a part), \$731.5 million were projected for US military advice and assistance to foreign countries in FY72. Forty-six countries were scheduled to receive military support consisting of approximately \$426.5 million for operating costs, \$207 million for investment costs and \$38 million for training. Operating and investment costs represent primarily equipment and equipment related expenditures. Training costs involve advice and assistance related to the use and maintenance of equipment and guidance of doctrinal and organizational matters. During FY72 only 13 of the 46 countries projected for MAP support were due to receive materiel assistance and only ten of these countries account for 97.3% of the total amount allocated to all 46 prospective recipient countries included in the FY72 MAP. The vast majority of these countries (33) were scheduled to receive only advice and training—11 in the US and 22 in their own countries.

From the above figures, it is obvious that our MAP is materiel oriented. The materiel function of MAP appears adequately regulated, docu-

mented and under close and constant scrutiny by many US agencies. A vast amount of money is involved in materiel which prompts constant attention by the watchdogs of the American taxpayer's dollar. However, the human "people" aspects of foreign military assistance appear to have received inadequate attention. This article does not challenge the importance or necessity of materiel in military modernization programs. It does challenge, however, that aspect of MAP dealing with US military advice and training.

Two objectives of the present Doctrine related to the US MAP are (1) to help our allies achieve military self-sufficiency to meet their own internal and external threats, thus enabling the US to (2) reduce the presence of its military personnel abroad. It is believed that these two objectives can be achieved; however, under the present MAP program, the pace of achieving these objectives is likely to be slow. The GNP and per capita income of many developing countries, the prime recipients of MAP, are not now adequate or increasing at a rate where necessary expenditures can be made to modernize quickly their armed forces. Most of these countries are primarily equipped with obsolete WWII materiel provided by the US under grant aid which has been greatly reduced or abolished in all but a relatively few countries in the past two years. Replacement of this materiel through HC purchase will probably be a gradual process extending over many years. If this premise is accepted, the following will tend to reflect the need for reorientation of the advice and training aspects of MAP.

Much of our present US military advisory effort is devoted to unit level advice and training involving the same obsolete equipment which

Mr. Hartness is the Scientific Advisor with the US Army Combat Developments Command Special Operations Agency at Ft. Bragg, N.C.



"Much of our present US military advisory effort is devoted to unit level advice and training involving the some obsolete equipment which the HC has had in its inventory for years."

the HC has had in its inventory for years. This also applies to addressing the same doctrinal and organizational problems which have existed for years. Many HC military personnel know better than their advisors the equipment they have been using and in which they have already acquired an acceptable degree of proficiency. In the areas of doctrine and organization there exists in most countries an expertise which approximates that of the US advisor. For years, foreign military personnel have been attending the USMA, C&GSC, basic and advanced combat arms schools and technical training courses in the US. Additional basic and advanced training has been provided by US schools abroad. It is believed that the expertise available in many of these countries, if properly utilized, could accomplish most of the tasks now performed by US advisors.

Over a period of years, HC unit commanders and staffs have become overly reliant on their US advisors, particularly at lower unit level. Characteristic of many developing countries, seniors are often reluctant to solicit or accept advice from their subordinates, even though their juniors are technically well qualified. Several US advisors have admitted that their main job appeared to be to bridge the "communications gap" existing within the HC military forces. HC commanders often delayed the implementation of simple projects or failed to act on routine matters pending consultation with US advisors. This preferential desire to seek advice from the US advisor rather than their own qualified personnel may possibly be deterring the HC military forces in attaining self-sufficiency.

Most US advisors admit that one of their major advisory difficulties involves overcoming cultural and political barriers existing in the HC. One prevalent characteristic in developing countries is the emphasis placed on sovereignty manifested by intense nationalism. This strong feeling of nationalism is at times reflected in unilateral, arbitrary decisions and acts on the part of the HC for the purpose of stressing the fact that it is "calling the shots." Another characteristic of newly emerging nations is political instability. The position of the leadership in this type of environment is always tenuous. The political consequences and public reaction of every contemplated move must be carefully calculated. For this reason, even minor decisions are often made at the top levels of government. Below national level, HC military commanders and staffs may have little authority to implement changes of any consequence. Therefore, US advisors at lower levels exert influence over their HC counterparts except in the area of increasing proficiency in individual specialized skills. As an advisor caustically remarked, "Ideas don't flow up—directives flow down." Therefore, only advisors at the national level normally are in a position to influence major advances in the HC modernization process. Even then, the HC is going to proceed at its own pace and act within the framework of its own culture and experience.

In many instances, the HC military leadership knows what should be done but, for one reason or another, does not take action. Within the socio-political environment described above, the US advisor attempts to make improvements in the HC military forces through advice and assistance. In most instances needed major im-



"Over a period of years, HC unit commanders and staffs have become overly reliant on their US advisors."



"Most US advisors admit that one of their major advisory difficulties involves overcoming cultural and political barriers in the HC."

provements are so obvious it is inconceivable that senior military leaders in the HC, some of whom are graduates of high level US military schools, haven't already recognized their need. However, for political, economic, or other reasons, many of these improvements have not been made, nor will they be until the leadership believes the time is right, if ever. For what they consider to be good and sufficient reasons, often unexplained to the advisor, the HC procrastinates and does not initiate the action necessary to make obviously needed improvements.

The pace of modernization of a HC's armed forces does not necessarily correlate with the size or quality of its US military advisory organization. Only under the most ideal of conditions does such a correlation exist. It is believed that the economic ability of a HC to modernize its forces and the leadership's desire to do so are the key factors in achieving self-sufficiency. In those few cases where the US is prepared to pay most of the cost of modernization and the HC is willing to engage in an all-out development effort, the size and quality of the US advisory organization will usually hasten the development process. But this situation does not prevail in most developing countries. More often, these nations do not have the resources to modernize

and the leadership is faced with socio-political constraints which mitigate against the rapid development of its armed forces. Yet there appears to be an unjustified onus of responsibility placed on the US advisory organization for the successful development of a HC's military forces. The presence of a large US advisory effort would appear to tend to magnify the illusion that the US actually controls the pace of modernization of a HC's armed forces and the manner in which these forces are employed.

Examination of the factors cited above in their aggregate leads to the conclusion that the continuing use of advisors at lower unit levels is open to challenge; it is difficult to visualize how such use will contribute substantially to the HC attainment of self-sufficiency. At this level advisors tend to become an ancillary part of the HC's armed forces which are relied upon more and more as time passes. Their presence as advisors at lower unit levels appears to inhibit rather than enhance HC self-reliance and confidence. The answer as to how self-sufficiency is to be attained appears to lie in tactfully compelling our allies to help themselves, to provide them with the capability to solve their own problems and then withdraw. With this capability, the introduction of new and more modern materiel into the HC's inventory becomes a secondary consideration. US training would probably continue to be required on new items of equipment, but this training would not necessarily have to be conducted in-country.

In view of the foregoing, the following recommendations are made:

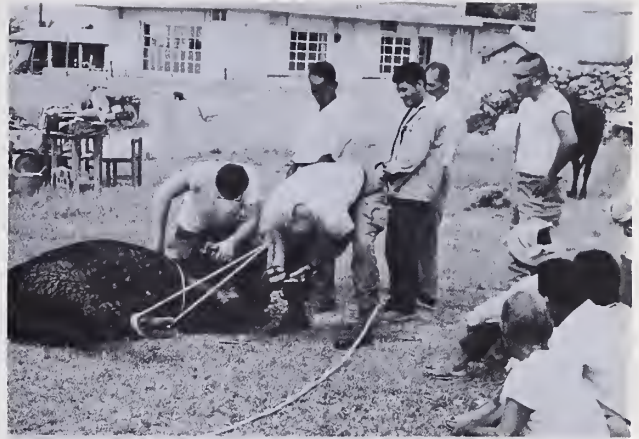
- That a country by country assessment be made of our military advisory effort to seek ways and means of reducing the US military presence abroad while concurrently providing the HC with a level of advice and assistance commensurate with its requirements and US policy objectives. Such an assessment should consider the use of a limited number of qualified senior advisors at national level—the level where policy decisions are made. The requirement for the continued use of advisors at lower unit levels should be carefully evaluated. Consideration should be given to the use of short term visits by advisory teams from theater resources to assess unit level competency and progress when this is deemed necessary or requested by the HC. Where valid training requirements are found to exist, use of mobile training teams, technical assistance teams, and CONUS and theater facilities for the

training of HC personnel should be substituted for US in-country resident advisors.

• That advisory emphasis be placed on assisting the HC to gain a capability to manage its own military establishment. This capability is needed if a country is to be able to determine its own requirements and evaluate what it can do for itself and where it must rely on others for assistance, thus enabling optimum use to be made of limited local and outside resources. No country can become self-sufficient until it acquires the capability of managing its military establishment. This entails planning, organizing, directing, coordinating, controlling, and evaluating the use of men, money, materials and facilities to accomplish its mission and tasks. This level of US advice and assistance is not being provided most HCs at present. Implied in this management function is research and development to the extent where the HC can make its own determinations of its military materiel requirements on a scientific basis, examining such factors as essential characteristics of the item or system under consideration, trade-offs, and cost and effectiveness of competitive options. Management also includes the capability to evaluate the advisability of using HC natural resources and production facilities in the interests of national economic development as opposed to outside purchase of materiel.

Regardless of the level and type, advice and assistance must be given in a manner which recognizes and enhances the dignity and self-respect of the advisor's counterpart and the military institution and nation to which he belongs. What constitutes the basis for dignity and self-respect may vary from country to country, although human desires for recognition and appreciation are universally constant. The counterpart may be unusually sensitive to the comparative affluence of his advisor. He may sense that the attitude of the advisor (and thus the US) is paternalistic or superior. Inwardly or outwardly, he may show resentment or possibly even passively accept his relationship. However, any of these reactions will probably result in a negative approach toward the advisory effort and a feeling of futility towards his own, and even possibly his country's, self-fulfillment. Too often the individual's own society tends to degrade him without any assistance from the US.

A nation is but a reflection of its people. It (particularly one which is in the developing



"Consideration should be given to the increased use of short term visits by advisory teams from theater resources." (Shown above is a US veterinary team assisting HC personnel in instruction on proper care of animals.)



"Emphasis should be placed on assisting the HC to gain a capability to manage its own military establishment—this includes R&D."



"Regardless of the level and type, advice and assistance must be given in a manner which recognizes and enhances the dignity and self-respect of the advisor's counterpart and the military institution to which he belongs."

stage) also seeks the respect and recognition of other nations. Most are extremely sensitive in this respect and their feeling of nationalism—the right to decide for themselves, right or wrong—may manifest itself in many ways. It may be expressed in terms of over-independence towards nations "which have arrived" even though these nations are attempting to assist them. At times, this over-independence may result in unwise decisions made solely to assert and display independence. The assisting nation must understand that such actions have greater morale and psychological value to the HC than does the monetary price which is paid.

A more prevalent expression of national pride may be the desire to create an organization, institution, or system which is unique and symbolic of progress and capability—one which commands the respect of others. Within the military this may be a model organizational unit equipped

with the latest available materiel—even though the rest of its armed forces are years behind in achieving this status. Or it may be a weapons system which its neighbors do not have. It is believed that we should understand and accept, within reasonable limits and regional security considerations, such desires, even though the HC project does not meet US evaluations of HC requirements. The existence of such a project may well serve to lessen national sensitiveness and even serve as a source of incentive and initiative for achieving overall self-sufficiency.

In short, the US advisor must be careful about arbitrarily applying his own standards and criteria in the country he is assisting. The judgment of the advisor must be tempered by the hopes, aspirations and fears of the HC in such a manner that the dignity, respect, and pride of that nation is not undermined by or subjugated to the US military advisory effort.



VISION IN DARKNESS

SP5 Bill Witcraft

Nighttime—all is serene and still. Suddenly the soft silence of the night is shattered by a loud burst of enemy weapons fire.

Immediately a Soldier asks, "Anyone see where that came from?"

In the past, studies have shown that the answer was usually wrong. Seventy to eighty percent of infantry rifle fire is usually expended at concealed or unobserved targets.

To help cut down on this high percentage, information is currently being collected by Project Team I of the Army Combat Developments Experimentation Command (CDEC), which is headquartered at Ft. Ord, to determine the probability of acquisition of concealed enemy positions during daylight and night, given some immediate visual and audio cues.

The experiment, "Target Engagement Through Visual and Audio Detection," (TEVAD) will yield empirical data on the accuracy with which individual riflemen can detect concealed hostile targets under various conditions, by using the visual and auditory cues associated with small arms fire.

The experiment is being conducted at CDEC's field laboratory on the vast Hunter Liggett Military Reservation (HLMR). One of the variables in this experiment is the necessity of having three different terrain segments. These terrain segments are characterized by being either high, medium or low in complexity.

High terrain is generally rough with rapid changes in elevation with chest-high grass—and undergrowth with tree trunks approximating ten percent of any field of view. Medium terrain is generally slightly rolling with knee to chest-high grass and trees while low terrain is generally flat open area with knee to chest-high intermittent grass and occasional light brush.

Since all three types of terrain can be found on HLMR, it is ideal for this type of experiment.

In each terrain segment, well camouflaged target positions, located at ranges of 75, 150, 250, 400 and 500 meters, conceal Soldiers who fire blank ammunition from rifles (M-16) or machineguns (M60) according to prescribed schedules.

When the Soldier is told to fire, he fires a burst of 5 to 7 rounds . . . waits three seconds, then fires another burst of five to seven rounds. Soldiers are stationed at observer sites (in both offensive and defensive positions) and are exposed to programmed bursts of the simulated fire. Following each exposure, each Soldier is queried to determine his evaluation of where the burst came from, the identity of the weapon fired and the approximate range from his position.

In addition to the terrain and weapon variations, trials are also being conducted under various light conditions, using both daylight and night hours. Another variation is the Soldier's familiarity with the terrain. The Soldiers in the offensive positions have been exposed to the terrain only briefly for the first time while the Soldiers in the defensive positions have been exposed to the terrain previously or for periods in excess of 30 minutes.

TEVAD is being conducted now at CDEC's field laboratory and will end in mid-February. The data collected will be forwarded to the Combat Developments Command Infantry Agency, sister agency to CDEC located at Ft. Benning, Ga., to be included in the study ASARS II (Army Small Arms Requirements Study).

Some very interesting—and significant—facts are emerging from this CDEC testing which may bring about great savings in ammunition (and lives) in real warfare.



SP5 Witcraft is currently assigned to the Combat Development Experimentation Command, Ft. Ord, Calif.

CHAPLAIN AGENCY LOOKS AT MVA

The Chaplain Agency looks at the Modern Volunteer Army in a positive light as a program which is oriented toward meeting the needs of the individuals in the Army as a part of mission accomplishment.

Because people are becoming of more importance and interest in the Army, the Chaplain is and should be involved. Perhaps it is time to determine if the chaplain's function is just to be "on call" or is he deeply involved and "moving out." The chaplain takes MVA as a challenge and an opportunity to be more effective in his ministry to troops and as a staff officer of his Commander. Many of you have been commanders of units with chaplains, so I do not hesitate to remind you that the fundamental mission of the chaplain is "To bring God to men, and men to God." I submit to you that we in the Army need not fear admitting to the power of God and should not be ashamed to admit to ourselves and to others the importance of God and religion in our lives each day. Chaplains have no monopoly on religion. It is not really old fashioned to be Biblically oriented. Chaplains are receiving guidance from the Chief of Chaplains to support the Modern Volunteer Army program. Chaplains should let it be known from the pulpit that they are in the Army, that they are proud to wear the Army uniform and that they support command religious programs. It is the desire of every chaplain, just as it is the desire of each of you here, that there be peace in this world, and that peace must be a just peace, and on occasions it is necessary to fight for the freedom to have that peace. There is nothing immoral in preaching patriotism nor is taking measures to defend our way of life in order to insure that the principles expounded in our Constitution shall be preserved.

The MVA, to be an effective Army, must train the whole man. Each Soldier must be trained physically and morally. Training is a function of command and the chaplain provides staff guidance to his commander to assist him in discharging his responsibility in this area. Yes, the commander is responsible for the religious program of his unit. Rather than merely seeing that his troops have available religious services, he should be the ultimate in example of a person who is morally sound and who utilizes every opportunity to so act, and who expresses his desire that sound morals be practiced by all members of his command. A Soldier who is superior physically, morally, and spiritually has the characteristics that will permit accomplishment of the Army's mission with fewer persons, and at less cost, which is a most important consideration now and for the Army in the future.

What can you as Agency Commanders do? As Staff Officers at CDC? It is proposed that there are two courses of action. This is not an either/or, but two concurrent courses you can follow.

FIRST. Through your relationship with the Center Team at your branch school. Discuss with them what the school is teaching their basic and career class officer of the responsibility that officer has for the religious and moral program of the unit he will be commanding. How can the commander best discharge his responsibilities in these areas? How should he approach his chaplain for assistance? How much can he rely on his chaplain for executing his command religious program, and how much action must the commander himself take? Where does the branch school get guidance in providing this information? There is an installation chaplain available. He can give guidance and will be

Editors Note: Adapted from the Chaplain Agency's comments from the November Commanders' Conference.



"Perhaps it is time to determine if the chaplain's function is just to be 'on call' or is he deeply involved and 'moving out.'"

happy to do so. Call for his assistance. The Chief of Chaplains is now training large numbers of chaplains in support of the "professional team" concept (Commander, Chaplain, Medical, Social Services) in serving the needs of the whole man. Many chaplains today are receiving training in Clinical Pastoral Education in an effort to make them better counselors, and this includes being counselors to commanders as well as to those with individual problems. At Benning and Knox chaplains are on the school faculty and teach in their leadership departments. Perhaps other branch schools can use installation chaplains more effectively on their faculties. Chaplains are being trained to be better staff officers. What can you do to get the schools to teach line officers how to better utilize the skills and abilities of chaplains?

SECOND. Through proper staffing of the TOE for which you are proponent with chaplain positions. With every new concept of a division, the crunch comes to reduce the number of personnel. There is a tendency to cut chaplains, because chaplains do not man a weapon, or do not perform maintenance on equipment. But as this crunch becomes more severe and greater

burdens are placed on officers and staffs to get their work done with fewer people, there is a need for greater moral and morale support, and just one chaplain can provide a lot of that for quite a number of troops. Therefore, you are urged to give guidance to your TOE people to follow in detail the guidance published in the August CDC Organization Directorate Newsletter for staffing units with chaplains and their supporting equipment. This Newsletter guidance directs that coordination will be effected with CHA in developing TOE. Some have done this. Please contact the Chaplain Agency for specific guidance at any time. If your branch commanders want chaplain coverage, put it in the TOE with chaplain positions. Your agencies are the proponents for 169 of the 170 TOE that have chaplains. There are no area support units of chaplains. Area coverage is provided by chaplains assigned to some TOE unit, who are also, as an additional duty, giving coverage to units without chaplains that are located in their area. Chaplain units are not looked on with favor by commanders or by chaplains, because commanders overwhelmingly want their chaplains to be with their units and on their staffs. Chaplains are needed especially with combat type troops. That is why our agency emphasizes that chaplains be assigned to units of the combat divisions, that is where they give comfort and prayers to troops in some of the heaviest fighting. They jump from airplanes and helicopters, and they trudge along the routes of troops to be with them and serve them. Don't wait for CHA to come up with a comment that you omitted chaplain spaces. You know where they should be and how many.

The MVA should provide a desirable atmosphere that will invite a young person to make a career of the Army. The commander/chaplain relation is most important. Chaplains must not be "on call," they must be "moving out." In order to have this relationship that will permit the chaplain to "move out" there must be chaplains in adequate authorization and commanders who are trained to know how to employ them with optimum effectiveness.



CURRICULUM AND INSTRUCTION TO CHANGE AT CGSC

Sweeping changes in curriculum and instructional method go into effect in August at the US Army Command and General Staff College (CGSC).

Officer students of the 1972-73 academic year will be treated to seminar and discussion group classes with lower student-teacher ratios, much greater choice of courses and new stress on individual research.

In addition, more will be required of the instructors, and the CGSC graduate can look forward to an enhanced image of his diploma.

At the CGSC, where the Army prepares its most promising field grade officers for all aspects of command, the following changes are in store:

- a streamlining of the common curriculum, the body of courses required for all CGSC students;
- a new "professional elective" program in which the student can learn more about areas of interest to him than the present common curriculum can teach;
- modernized and improved educational methods, including seminars and smaller class sizes, plus two-hour blocks of instruction to replace three-hour blocks;
- improved equipment, especially for the school's closed-circuit TV system; and
- in-service training and escalating standards for the college's instructors.

The changes have been encouraged in a series of studies and surveys, beginning with the Haines Board of 1966. At that time, Gen. Ralph Haines, now Commanding General of the US Continental Army Command, said the allocation of 10 per cent of school time to electives was, at best, just a start.

Last month, in a new report on Army Officer Education, Maj. Gen. Frank Norris further encouraged the CGSC to go beyond the "one-course, one-curriculum" system. This accords with the Army's current tendency toward increased specialization among officers.

A recent survey of Army generals and another survey of this year's CGSC class also showed

strong support for the electives concept.

The common curriculum of seven required courses will be trimmed to occupy just 60 per cent of the year's study. One course is being cut two-thirds in hours, and three others will be one-third shorter. Some of the reduced course materials will be streamlined, and some will be transferred to one of the 10 new professional electives.

These electives represent the most extreme change, covering in depth: advanced tactics, logistics, joint operations, management, high staff, security assistance and intelligence.

During the first semester, study will be 80 per cent common curriculum, with other time allocated to guest speakers, individual study and an "associate elective." (One associate elective will be required each semester, as is the case this year.)

The heavy stress on common curriculum during the first semester will ensure that officer students cover prerequisites of the professional electives.

During the second semester, only 40 per cent of the officer student's time will be spent on common curriculum. Each student will study four professional electives, two each term.

Instruction in the electives will be given by the same four faculty departments that teach the common curriculum: Command; Division Operations; Larger Unit Operations; and Joint, Combined and Special Operations.

Helping in the effort to improve the student-teacher ratio is the fact that next year's CGSC class will be 20 per cent smaller than this year's—about 1,100 next year. The number of officer students from allied nations is expected to remain the same, representing somewhat less than 10 per cent of next year's class. Each class also has several students from the other American services.

It is hoped each student can have a "meaningful research experience" during his CGSC study, and individual work will be emphasized. The stress will be on problem solving instead of skill training.



ARROWHEAD SPOTLIGHTS

SP4 SCOTT ROTH

by LTC Bob D. Schuler

If your birthdate was drawn as number one in the first draft lottery, and you were a healthy, 21 year old American male, would you consider yourself unlucky?

Scott Roth thought Lady Luck was dealing from a stacked deck back in 1969, when his birthdate, September 14, made national news. Today—well, that's a different story. Scott thinks he may not be so unlucky afterall.

Sp4 Scott D. Roth is currently serving in the United States Army as one of a rare and vanishing breed—a Scientific and Engineering Assistant (S&E). In this job Scott is a square peg in a square hole, for he is doing what he was trained for in civilian life. Assigned to CDC's Nuclear Agency at Ft. Bliss, Tex., Scott works as a mathematician, statistician and computer programmer.

A graduate of California State College in Long Beach, Roth holds a BA in mathematics. Since arriving at the Nuclear Agency he has done graduate work in computer science at New Mexico State University in Las Cruces, N.M.

It didn't always look as if the Army was going to find a use for Scott's talents. When he received his draft notification his initial feelings were based upon his environment and the time—which is to say that in Southern California in 1969, the students were not particularly enthusiastic about military life. Scott admits that his basically pacifist nature caused him some concern about the prospect of military service. But he answered the call and soon found himself at Ft. Ord, Calif.

"Basic Combat Training was a real shock" Scott recalls. "My mathematical experience, where everything is based on rationality, didn't prepare me for Basic. I didn't think everything the Drill Sergeants did was rational."

In spite of the trauma of BCT, Scott managed to endure. One day, quite by accident, he saw some forms pertaining to the S&E program. He filled them out and sent them in. Not too many



SP4 Scott Roth, (pictured above), is a Scientific and Engineering Assistant at CDC's Nuclear Agency.

weeks later he was notified—by the GI he was to replace—that he had been accepted as an S&E Assistant. Immediately after BCT, in February 1971, Scott was assigned to the Nuclear Agency.

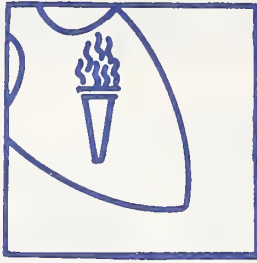
Scott's work has included such exotic tasks as development of methodology for computing damage done to targets and collateral damage as the result of a nuclear explosion. The challenge of his job and the opportunity to use his talents in an area in which he is interested have given Scott a good outlook on his Army service. "I have never had a job before where I was so engrossed," he said. "I like the Nuclear Agency because of the professionalism and interaction between people."

Although he still finds some aspects of Army life aggravating, such as the requirement to wear caps, he understands the necessity for such things as uniformity. Whatever his minor complaints might be they seem to be more than made up for by the opportunity to work with IBM 7093 and UNIVAC 1108 computers. He is particularly happy that he and his fellow S&E's are left pretty much on their own. He said, "We drive up to White Sands when we need to use the computers. It is often at night and we have little or no supervision." They have a job to do and are allowed to do it—being treated like the competent professionals they are.

Scott hopes to work in research after his Army service terminates in June. His interests lie in the fields of computer science, artificial intelligence and theories of algorithms, particularly as they might be applied in medicine, ecology or transportation.



LTC Schuler is currently assigned to the Office of Chief of Information, Pentagon.



The Point of the Arrow

April Questions

- (1) Soviet general purpose ground forces are composed of two basic type divisions: the _____ Division, and _____ Division.
- (2) Soviet doctrine assumes that the _____ will be the most common form of combat.
- (3) Reacting to the US Army attack helicopter programs, the Soviets recently modified their main battle tank, the T-_____ by retrofitting it with a _____.
- (4) The new Soviet Infantry Combat Vehicle, BMP, carries a crew of _____ and _____ infantry soldiers.
- (5) The calibers of the Soviet divisional support field artillery guns/howitzers are _____ mm and _____ mm.

March Answers

1. *What is a threat study?*

ANSWER: A threat study is an analysis, based on intelligence, of a potential enemy's capability to counter a US combat development.

2. *How large is the Soviet Army?*

ANSWER: The Soviet Army has a personnel strength of almost one and one-half million men.

3. *Generally speaking, are Soviet tactical organizations larger or smaller than US counterparts?*

ANSWER: Soviet organizations are generally smaller. For example, Soviet tank companies contain only 10 tanks as compared to 17 in US tank companies.

4. *What is the Qualitative Management Program for Enlisted Personnel?*

ANSWER: It is a recently implemented program which establishes a specific grade which enlisted personnel must attain in order to remain in the Army beyond a specified period of time.

5. *What is PRA?*

ANSWER: PRA is the Projected Requisitioning Authority issued quarterly by DA giving the commissioned officer manning level by grade and branch for major commands.

CDC GETS NEW STAFF CHAPLAIN

The new Staff Chaplain at the Command's headquarters at Ft. Belvoir, Va., is Colonel Carlos J. Lively, Jr. He succeeds Colonel Joseph Chmielewski, who retired in December.

"I believe this will be a challenging and rewarding assignment", commented Chaplain Lively, who is married and has one son.

Chaplain Lively comes to CDC from South Vietnam, where he was Staff Chaplain for the United States Army Vietnam.

Since coming on active duty as an enlisted man in WW II, the new Chaplain has served in various positions. He graduated from Infantry OCS and served as an Infantry Officer until 1955. In that year he graduated from the basic course at the Chaplain's School at Ft. Slocum, N.Y. In 1957, he completed the Company Officer Course there. Returning to the school in 1959, he completed the Chaplain Advanced Course.

The airborne qualified Chaplain has also completed the Command and General Staff College, as well as the Army Installation Management program at the US Army Management School, Ft. Belvoir, Va.

As the Staff Chaplain for CDC, Chaplain Lively sees his duties as both pastor to the headquarters and advisor to the staff and subordinate commands on the chaplain related aspects of the CDC Program. In addition to exercising staff supervision over subordinate command chaplain activities, he will maintain liaison with the Office, Chief of Chaplains on matters of policy and ecclesiastical doctrine.

In discussing what he hoped to accomplish in his new assignment, Chaplain Lively commented that, to him, one of the most exciting and challenging aspects of the CDC philosophy is its emphasis upon the Soldier. Chaplain Lively said, "The man in the field has got to be considered as a total person, and his spiritual and religious relationships are an essential part of that totality." Continuing on the same thought, he said, "The entire nature of the ministry is expanding these days in recognition of the reli-



Chaplain (Colonel) Carlos J. Lively, Jr.

gious implications in all facets of life, and the chaplain has been in the front ranks of this movement. It is my goal while at CDC to assist in both the added recognition and the expansion of this role that the chaplain will take in our Army of the future." From his vantage point as CDC Staff Chaplain, Chaplain Lively should be in a good position to accomplish this.

Colonel Lively did his undergraduate work at The Citadel in Charleston, S.C., and at Oglethorpe University in Atlanta, Ga. He completed graduate work for his degree in Divinity at the Southeastern Baptist Theological Seminary in Wake Forest, N.C.

Among the many decorations the new Chaplain wears are the Legion of Merit with Oak Leaf Cluster, the Meritorious Service Medal, the Joint Service Commendation Medal, the Army Commendation Medal with Oak Leaf Cluster, and the Armed Forces Honor Medal, First Class (RVN).





Spot Reports

Hunter Liggett Birthday



Ft. Ord, Calif. . . . March 21st is the birthday of Hunter Liggett . . . not Hunter Liggett as a place, the big military reservation near King City where the Army Combat Developments Experimentation Command has its field laboratory . . . but Hunter Liggett, the man (above).

General Liggett's name was chosen for the military reservation, when it was acquired by the Army in 1940, in memory of a great Soldier, a brilliant military careerman who died December 30, 1934 at the Presidio of San Francisco. He had retired from the service in 1921.

During World War I, General Liggett had received high honors for his direction of the final offensive of the US First Army when he took over from General Pershing at the Meuse-Argon action.

"Black Jack" Pershing at that time stated that General Liggett's direction of that action was ". . . an

achievement that is scarcely to be equalled in American history."

Born in Reading, Pennsylvania in 1857, General Liggett was graduated from West Point in 1879. He also attended the Army War College in 1910 and became its director for two years, after which he served as its president upon his promotion to brigadier general in 1913.

He served twice in the Philippines, once following service with the Army of Occupation in Cuba after the Spanish-American War; and again as commander of the Department of the Philippines in 1917.

He was then named Commanding General of the 41st Division in the AEF in France, commanding the largest single mobile fighting unit in history to that date; and, in this position, was credited with delivering the master stroke of the Americans in the War.

When he returned to the States after that action, he commanded the Western Department of the 9th Component area at the Presidio of San Francisco from August 1919 to the date of his retirement, March 1921.

In 1940, the Army obtained the Hunter Liggett reservation and named it in his honor. It was used until 1957 as a military training location for National Guard and Reserve Training units and as a Sixth Army recreational facility; and at that time, CDEC's field laboratory was established there.

For the past 15 years, many complex and unique instrumentation systems have been located there for the use of CDEC's military-scientific teams in compiling data for answering the Department of Army's questions: How should the Army of Tomorrow fight? How should it be equipped and organized? The answers to these vital defense questions are found in CDEC's simulated warfare there.

Thus Hunter Liggett Military

Reservation—once a vast training ground for a present day Army, today has been molded by CDEC into a highly instrumented and efficient laboratory for the examination and evaluation of future tactics and techniques which will insure success and survival for the Soldiers of Tomorrow.

Soldiers of Today look back, on this date, to honor one of Yesterday's great Soldiers: General Hunter Liggett.

Barbed Tape

Ft. Belvoir, Va. . . . "Taping" the enemy to keep him out of Soldiers' bunkers and bases is being looked into by the Army's Combat Developments Command (CDC) headquartered at Ft. Belvoir, Va.

The tape is actually a reel of barbed spring steel which CDC proposes as a replacement for the present ungainly concertina rolls familiar to many Soldiers in combat and administrative bases. The barbed tape comes in its own dispenser package making it easier to use and recover, while slowing down intruders five times more effectively than the old wire, it is claimed.

Barbed tape, self-contained in its own reusable foam plastic shipping pack, does not require extra tools for setting up, and eliminates one of the principal problems of the old wire—tangles. It is simply pulled from its package in a 20-meter long series of loops 30 inches high.

A 100-meter barrier can be erected in six minutes using a small vehicle or in just 20-30 minutes by two men who can also take it down

and repack it with minimal effort. And, according to CDC, the tape can remain in place for at least a year without maintenance.

Citizenship



Ft. Leavenworth, Kan. . . . At a recent ceremony held at the Ft Leavenworth Officer's Open Mess, Brigadier General A. G. Hume (above right), Commanding General Combat Systems Group, performed a unique task when he presented to 2LT Nubar Yacoubian (above left) a plaque commemorating the lieutenant's new status as an American citizen.

Born in Jerusalem, LT Yacoubian immigrated to the United States in July of 1967, and was followed by his family in August of 1968. The Yacoubians settled in Memphis, Tennessee and Nubar enrolled in Memphis State University where he received a BA degree in diplomatic history. After enlisting in the Army in January of 1971 he was selected for Officer Candidate School and received his commission in September of 1971. LT Yacoubian attended the Signal Officer Basic Course at Ft. Gordon and is now assigned to the Combat Systems Group at Ft. Leavenworth. LT Yacoubian is presently a member of the Models and Information Systems Division of Division Doctrine and Organization Directorate.

As the first American in his family, LT Yacoubian is very proud of his new citizenship and has high hopes that the other members of his family will soon receive their naturalization certificates.

Asked of his impression of the military service and his plans for the future LT Yacoubian said, "Certainly life in the service is not easy, especially in the first several months, but this did not surprise me since I had been exposed to many unusual situations when I lived in the Mid East. I am very proud to have been trained to defend my country. When my military service is complete I feel that I can continue to contribute to my country and its peace-keeping mission by working in the diplomatic corps of the State Department. My knowledge of Turkish, Arabic, French, Armenian and English will certainly be most helpful in my pursuit of this very challenging career."

Military Leadership

Ft. Leavenworth, Kan. . . . Military leadership is a subject of unusually keen interest to today's planners of tomorrow's Modern Volunteer Army (VOLAR). It is therefore fitting that the Army examine its basic military leadership manual, FM 22-100, with a view toward updating and modernizing its contents.

The Continental Army Command's Infantry School, which has preparation responsibility for FM 22-100, is currently engaged in revising the 1965 edition for submission to the printer in the 4th quarter of FY 1972.

The Infantry School will need the dedicated assistance of other interested Army commands and agencies in this comprehensive revision effort.

Lt Gen John Norton, CG, Combat Developments Command, has pledged the total support of his command to the revision. By letter dated 23 September 1971, HQ, USACDC notified

the Combat Systems Group of General Norton's personal interest in the project and tasked HQ, Combat Systems Group with the responsibility to monitor the USACDC participation in it. To execute this task, Combat Systems Group has requested all USACDC agencies, the Personnel and Logistics Systems Group, the Concepts and Force Design Group, and the Intelligence and Control Systems Group to send their review comments on the initial draft manuscript revision to HQ, Combat Systems Group for consolidation and submission to HQ, USACDC. USACDC agencies are expected to coordinate their inputs with collocated schools and secure Center Team positions. Hopefully this procedure will produce an incisive, thorough, and comprehensive updating of military leadership doctrine and techniques.

The revision will undoubtedly confirm many old truths about leadership in general, and military leadership in particular; but it should also evoke some new thinking on how military commanders can best influence and lead today's young citizen-soldier who, in the words of the Sergeant Major of the Army, ". . . can be led but only by methods appropriate to our times."

Unit of Choice

Ft. Ord, Calif. . . . The right man for the right job is getting special attention in the United States Army right now. One of the means of accomplishing this is the new "Unit of Choice" manner of recruiting which is fast gaining popularity with young men of the country.

Since February 1st, the US Army Combat Developments Experimentation Command at Ft. Ord has been designated a "unit of choice" recruiting option—one of four in the entire Sixth Army District which includes California, Idaho, Washing-

ton, Oregon, Montana, Nevada, Arizona, Wyoming, Utah, Colorado and North and South Dakota.

The other three units of choice sharing the distinction with CDEC at Ft. Ord are the 212th Artillery Group and 3d Armored Cavalry Regiment of Ft. Lewis, Wash., and the 30th Military Police Battalion, Presidio of San Francisco.

The program is designed to help high school graduates join a compatible organization in the Army and to assure the Army's obtaining highly qualified personnel interested in their jobs and a military career, willing to earn their increased pay. A young man enlisting for any one of these four units will have special pride in his Army job, special pride in his organization and that's all to the good in the Army Defense picture.

A man enlisting for CDEC under this highly selective program will become a member of its Experimentation Brigade. He will take part in the vital role played by the Brigade in CDEC's experimentation program but will be, first and foremost, a Soldier in Today's Army.

The type of young man who will choose CDEC for his Army duty will be a young man of intelligence who probably prefers outdoor activity to desk work, who will find the demands of the active life in CDEC's mock warfare preferable to sedentary work. He will enjoy "roughing it" at CDEC's remote and rugged field laboratory and find much satisfaction in knowing that his efforts may well determine how Tomorrow's Army will fight, be organized, be equipped.

CDEC recruiters are promising no luxurious bed of roses in this duty, though it has its compensations for the outdoor type young man who prefers a sky to a ceiling.

In CDEC experimentation, he may perform duty as an infantryman in one of the rifle companies, performing much the same duties as he would in any rifle company in the Army, but he will also be interestingly involved in the experimentation process at the same time. He may be part of a tactical unit operating in the field to test new concepts or he may be collecting data in

a variety of experimental situations. He may be testing exotic new weaponry and equipment; and he may be a tanker or an armored cavalry scout supporting the CDEC mission. But bored he won't be.

And he will be guaranteed, if he names CDEC as his "Unit of Choice" that he will spend at least half of his Army tour of duty working for CDEC. He will be given his basic training at Ft. Ord where CDEC is headquartered and, after completion of Advanced Individual Training at the appropriate specialty school—most probably at Ft. Ord—will then serve the next 16 months at the field laboratory of CDEC which is at the Hunter Liggett Military Reservation near King City, 55 air miles south of Ft. Ord. There, the CDEC soldier earns an extra \$60 a month.

This is a new idea, a new offer, and should provide special units like CDEC with young men who are equally "special." And this is the type of young man that CDEC's commanding general, Brigadier General Ray Ochs, is hoping to attract.

Brigadier General Ochs personally requested that this program be initiated at CDEC and has appointed a Special Staff headed by Major Joseph C Conrad to assist in the establishment and supervision of the "Unit of Choice" Recruiting Program here.

The goal is to make CDEC an all-volunteer RA recruited force by November of this year.

CSM Retires

Ft. Ord, Calif. . . After 27 years of service to the United States Army, Command Sergeant Major Eugene A Croenne has retired. He has been serving as Command Sergeant Major of Experimentation

Brigade, US Army Combat Developments Experimentation Command at Ft. Ord. After his retirement ceremonies on Monday, January 17th, he put aside his uniform and moved to San Bernardino, California, where he will be Military Service Sales Representative for the EBSCO Industries' Long Beach Branch.

CSM Croenne had been with CDEC since December 1968 and in the Army since June 14, 1945 when he joined up in his home town, Terre Haute, Indiana. He has since seen service in Hawaii, Korea, Austria, Italy and several stateside posts. In most cases, he was accompanied by his wife Bettylu (usually called Pete) and their daughter Michele Anne.



Retirement ceremonies for CSM Croenne (above right) were held at Post Headquarters' and during the ceremonies, he was presented the Legion of Merit by Col. Charles G. W. Wahle (above left) for his superior service to his unit and to the command during his tour of duty with CDEC. His position will now be filled by Command Sergeant Major Hal Hulett, newly arrived at CDEC from Korea where he served with 1st Cavalry.

Before his departure, CSM Croenne was entertained at luncheon by personnel of Headquarters, Experimentation Battalion, at a Cannery Row restaurant.

Colonel Boyd L. Branson, deputy commander of the US Army Combat Developments Experimentation Command which is headquartered at Ft. Ord, retired in February, after more than 31 years of service to the Army.

Colonel Branson first arrived at CDEC in 1963 after attending the Canadian National Defense College at Kingston, Ontario; and from that time, except for a year in Korea (July 1965 to July 1966 when he served as G3 of I Corps Group, US Army of the Pacific) he has served at CDEC, either as Deputy to the Commander or, as when first assigned, as its Chief of Staff, although he commanded CDEC twice — from July to December 1968, and again from mid-February to March of 1971.

He entered the service on active duty in June 1940, following his graduation from the University of Arizona.

After attending the Cavalry School at Ft. Riley, Kan., in that year, he was assigned with the 1st Cavalry Division with which he remained throughout its World War II operations in New Guinea, Bismark Archipelago, Leyte, South Philippines and the



Luzon Campaigns. He returned to the United States in 1944 as Lieutenant Colonel and was selected to attend the Command and General Staff College at Ft. Leavenworth, Kan.

In 1944, Colonel Branson returned to the 1st Cavalry Division in Japan, and returned to the United States in 1947 to attend the Armor School.

From 1954 to 1957, he was commanding officer, 19th Armor Group; Assistant to the Deputy Commander of Seventh Army. Returning to the United States in 1957, he served with 1st Armored Division at Ft. Polk, La., as Chief of Staff and at the Department of the Army

and Department of Defense as Chief of the Far East Pacific Division, Office of the Deputy Chief of Staff for Military Operations; Executive Officer, Under Secretary of the Army; and Office of the J-3, Joint Chiefs of Staff.

After those positions in the Nation's Capitol, Colonel Branson attended the Canadian National Defense College and came to CDEC's Headquarters when the course was completed.

Among his many decorations, Colonel Branson wears the Silver Star, the Legion of Merit medal, seven awards of the Bronze Star with V-device for valor, the Air Medal, Army Commendation Medal with two oak leaf clusters and the Purple Heart. On his retirement from CDEC, its commander, Brigadier General Ray Ochs, awarded him another Legion of Merit for his meritorious service to the command.

In retirement, Colonel Branson will remain at his family home in Monterey, with his wife, Ruth Ann, and their daughter, Susan.

The vacancy he leaves at CDEC will be filled by Colonel John H. Hoyer who has been Deputy Chief of Staff for Experimentation.

Commanding General LTG John Norton
Information Officer Col. George H. Hallanan Jr.
Managing Editor Lt Robert H. Gregory
Production Editor Lt Gary R. Steimer

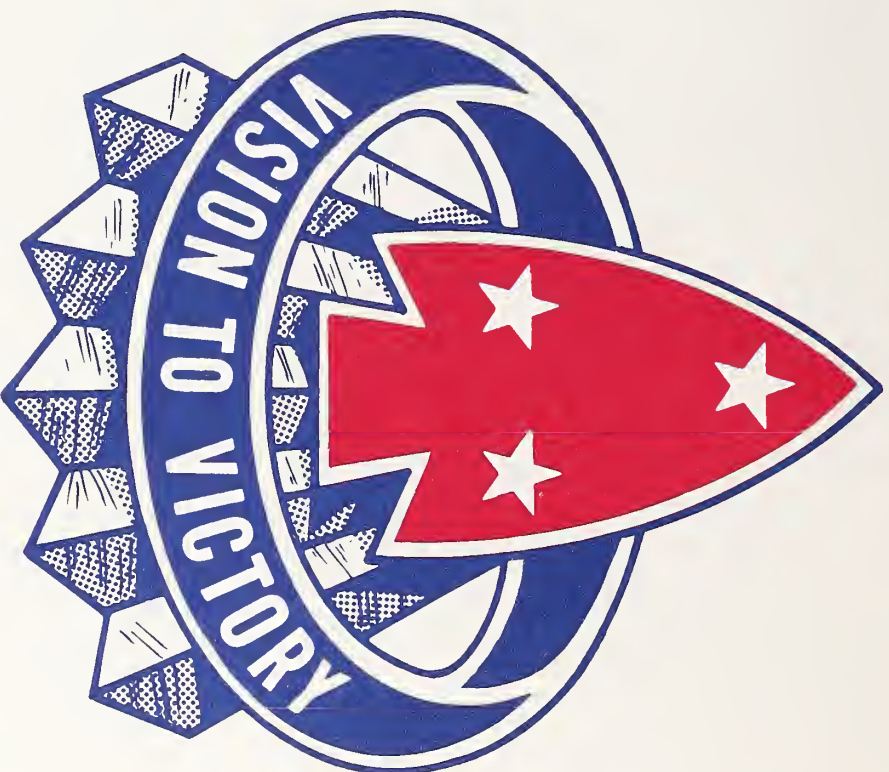
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FLARE

CDC IS DOING SOMETHING...



EVERY DAY